



TFT LCD Tentative Specification

MODEL NO.: N134B6 - L04

Customer : _____

Approved by : _____

Note :

記錄	工作	審核	角色	投票
2008-08-15 16:09:10 CST	PMMD III Director	annie_hsu(徐凡 琇/56522 / 54873)	Director	Accept



- CONTENTS -

REVISION HISTORY	3
1. GENERAL DESCRIPTION	4
1.1 OVERVIEW	
1.2 FEATURES	
1.3 APPLICATION	
1.4 GENERAL SPECIFICATIONS	
1.5 MECHANICAL SPECIFICATIONS	
2. ABSOLUTE MAXIMUM RATINGS	5
2.1 ABSOLUTE RATINGS OF ENVIRONMENT	
2.2 ELECTRICAL ABSOLUTE RATINGS	
2.2.1 TFT LCD MODULE	
2.2.2 BACKLIGHT UNIT	
3. ELECTRICAL CHARACTERISTICS	7
3.1 TFT LCD MODULE	
3.2 BACKLIGHT UNIT	
4. BLOCK DIAGRAM	10
4.1 TFT LCD MODULE	
5. INPUT TERMINAL PIN ASSIGNMENT	11
5.1 TFT LCD MODULE	
5.2 TIMING DIAGRAM OF LVDS INPUT SIGNAL	
5.3 COLOR DATA INPUT ASSIGNMENT	
5.4 EDID DATA STRUCTURE	
5.5 EDID SIGNAL SPECIFICATION	
6. CONVERTER SPECIFICATION	15
6.1 INPUT CONNECTOR PIN ASSIGNMENT	
6.2 INPUT ELECTRICAL CHARACTERISTICS OF CONVERTER	
7. INTERFACE TIMING	16
7.1 INPUT SIGNAL TIMING SPECIFICATIONS	
7.2 POWER ON/OFF SEQUENCE	
8. OPTICAL CHARACTERISTICS	18
8.1 TEST CONDITIONS	
8.2 OPTICAL SPECIFICATIONS	
9. PRECAUTIONS	21
9.1 HANDLING PRECAUTIONS	
9.2 STORAGE PRECAUTIONS	
9.3 OPERATION PRECAUTIONS	
10. PACKING	22
10.1 CARTON	
10.2 PALLET	
11. DEFINITION OF LABELS	24
11.1 CMO MODULE LABEL	
11.2 CARTON LABEL	



Doc No.:
Issued Date: Jul, 22, 2008
Model No.: N134B6 -L04

Tentative

REVISION HISTORY

Version	Date	Page (New)	Section	Description
Ver 0.0	Jul. 22,'08	All	All	Tentative specification first issued.

1 GENERAL DESCRIPTION

1.1 OVERVIEW

N134B6-L02 is a 13.4" TFT Liquid Crystal Display module with LED Backlight unit and 40 pins LVDS interface. This module supports 1366 x 768 Wide-XGA mode and can display 262,144 colors. The optimum viewing angle is at 6 o'clock direction.

1.2 FEATURES

- Aspect ratio 16:9
- WXGA (1366 x 768 pixels) resolution
- 3.3V LVDS (Low Voltage Differential Signaling) interface with 1 pixel/clock
- Meet RoHS requirement
- LED Backlight

1.3 APPLICATION

- TFT LCD Notebook

1.4 GENERAL SPECIFICATIONS

Item	Specification	Unit	Note
Active Area	296.422 (H) x 166.656 (V) (13.4" diagonal)	mm	(1)
Viewing Area	299.422 (H) x 169.656 (V)	mm	
Driver Element	a-si TFT active matrix	-	-
Pixel Number	1366 x R.G.B. x 768	pixel	-
Pixel Pitch	0.217 (H) x 0.217 (V)	mm	-
Pixel Arrangement	RGB vertical stripe	-	-
Display Colors	262,144	color	-
Transmissive Mode	Normally white	-	-
Surface Treatment	Hard coating (3H), glare type	-	-

1.5 MECHANICAL SPECIFICATIONS

Item		Min.	Typ.	Max.	Unit	Note
Module Size	Horizontal(H)	306.7	307.2	307.7	mm	(1)
	Vertical(V)	180.3	180.8	181.3		
	Vertical(V) (w PCB)	194.3	194.8	195.3	mm	
	Depth(D)	-	3.2	3.5	mm	
Weight		-	295	310	g	

Note (1) Please refer to the attached drawings for more information of front and back outline dimensions.

2 ABSOLUTE MAXIMUM RATINGS

2.1 ABSOLUTE RATINGS OF ENVIRONMENT

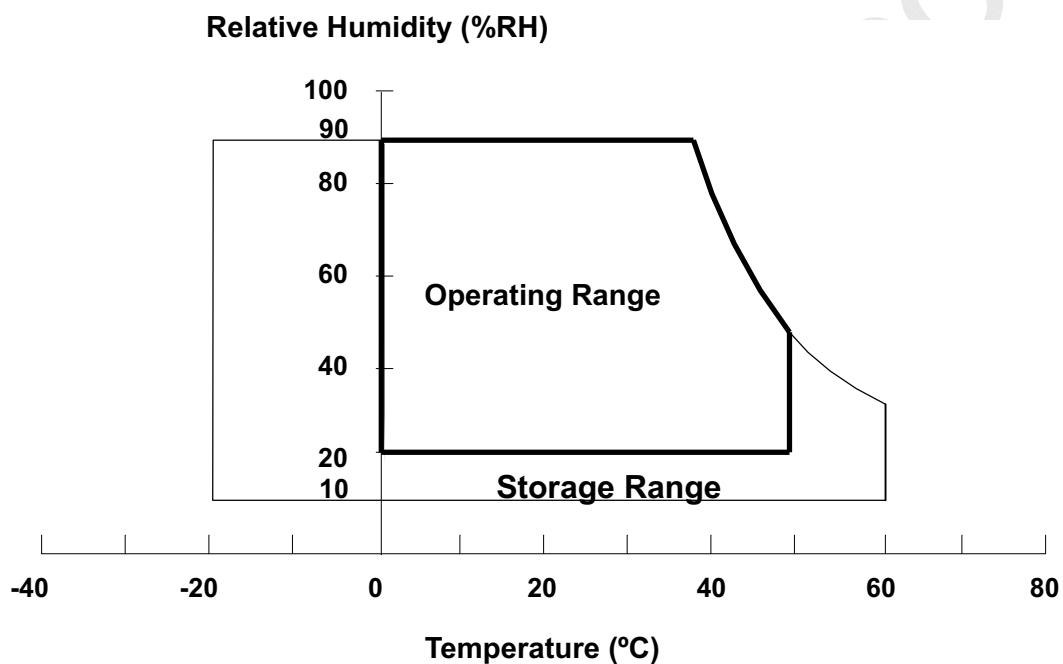
Item	Symbol	Value		Unit	Note
		Min.	Max.		
Storage Temperature	T_{ST}	-20	+60	°C	(1)
Operating Ambient Temperature	T_{OP}	0	+50	°C	(1), (2)
Shock (Non-Operating)	S_{NOP}	-	220/2	G/ms	(3), (5)
Vibration (Non-Operating)	V_{NOP}	-	1.5	G	(4), (5)

Note (1) (a) 90 %RH Max. ($T_a \leq 40$ °C).

(b) Wet-bulb temperature should be 39 °C Max. ($T_a > 40$ °C).

(c) No condensation.

Note (2) The temperature of panel display surface area should be 0 °C Min. and 60 °C Max.



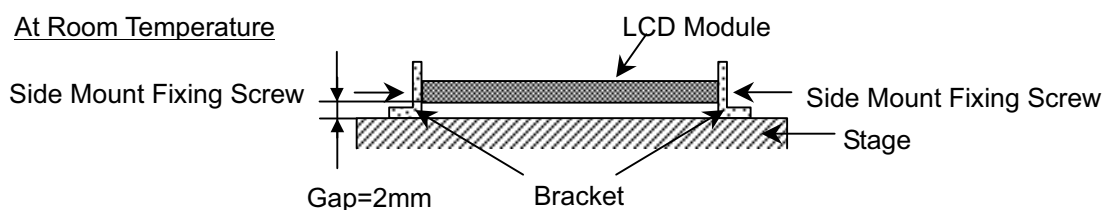
Note (3) 1 time for $\pm X$, $\pm Y$, $\pm Z$. for Condition (200G / 2ms) is half Sine Wave,.

Note (4) 10 ~ 500 Hz, 30 min/cycle, 1 cycles for each X, Y, Z axis.

Note (5) At testing Vibration and Shock, the fixture in holding the module has to be hard and rigid enough so that the module would not be twisted or bent by the fixture.

The fixing condition is shown as below:

At Room Temperature



2.2 ELECTRICAL ABSOLUTE RATINGS

2.2.1 TFT LCD MODULE

Item	Symbol	Value		Unit	Note
		Min.	Max.		
Power Supply Voltage	V _{CC}	-0.3	+4.0	V	(1)
Logic Input Voltage	V _{IN}	-0.3	V _{CC} +0.3	V	

2.2.2 BACKLIGHT UNIT

Item	Symbol	Value		Unit	Note
		Min.	Max.		
LED Light Bar Power Supply Voltage	V _L	--	27.2	V	(1), (2)
LED Light Bar Power Supply Current	I _L	--	TBD	mA	

Note (1) Permanent damage to the device may occur if maximum values are exceeded. Function operation should be restricted to the conditions described under Normal Operating Conditions.

Note (2) Specified values are for LED (Refer to Section 3.2 for further information).

3 ELECTRICAL CHARACTERISTICS

3.1 TFT LCD MODULE

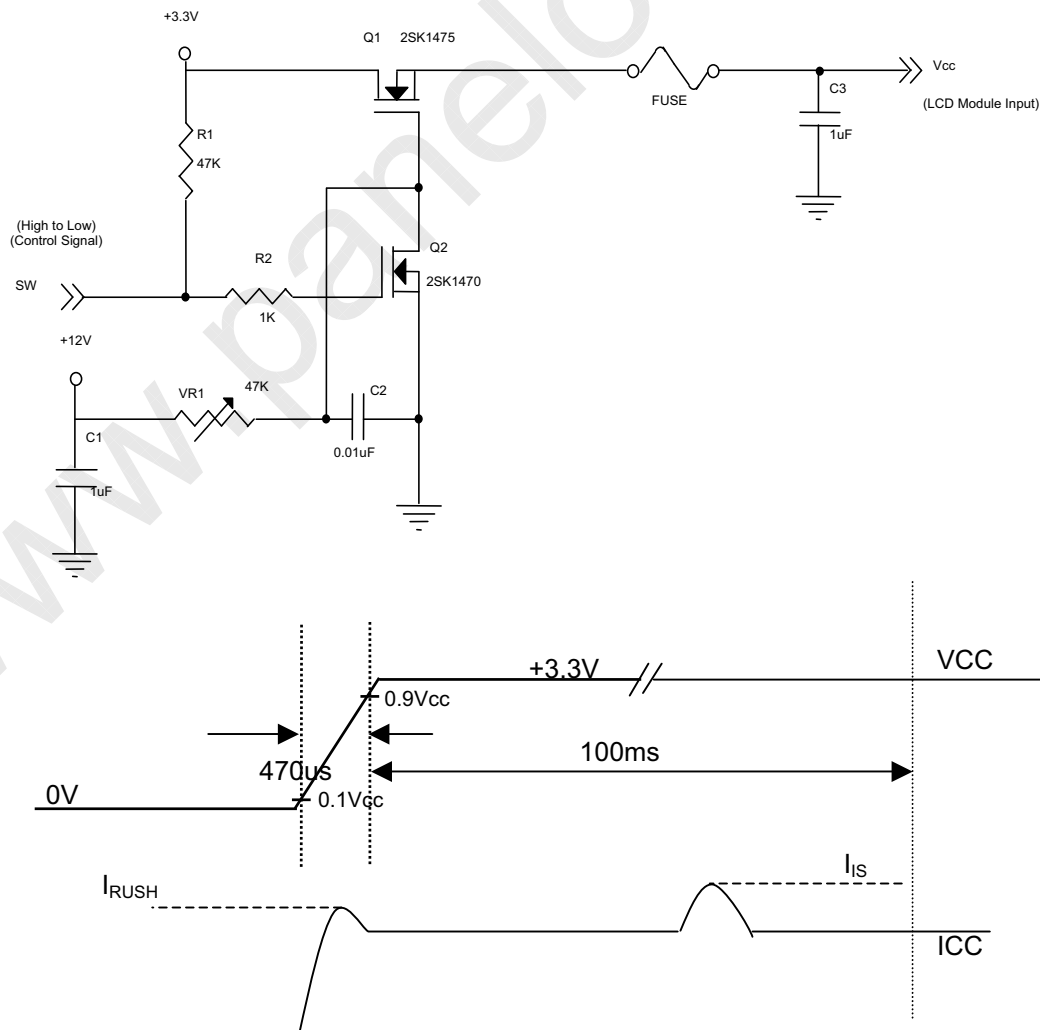
Parameter	Symbol	Value			Unit	Note
		Min.	Typ.	Max.		
Power Supply Voltage	V _{CC}	3.0	3.3	3.6	V	-
Ripple Voltage	V _{RP}	-	50		mV	-
Rush Current	I _{RUSH}	-		1.5	A	(2)
Initial Stage Current	I _{IS}			1.0	A	(2)
Power Supply Current	White	-	TBD	TBD	mA	(3)a
	Black				mA	(3)b
LVDS Differential Input High Threshold	V _{TH(LVDS)}			+100	mV	(5), V _{CM} =1.2V
LVDS Differential Input Low Threshold	V _{TL(LVDS)}	-100			mV	(5), V _{CM} =1.2V
LVDS Common Mode Voltage	V _{CM}	1.125		1.375	V	(5)
LVDS Differential Input Voltage	V _{ID}	100		600	mV	(5)
Terminating Resistor	R _T	-	100	-	Ohm	-
Power per EBL WG	P _{EBL}	-	TBD		W	(4)

Note (1) The ambient temperature is Ta = 25 ± 2 °C.

Note (2) I_{RUSH}: the maximum current when VCC is rising

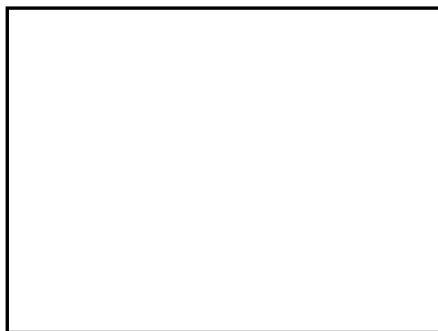
I_{IS}: the maximum current of the first 100ms after power-on

Measurement Conditions: Shown as the following figure. Test pattern: black.



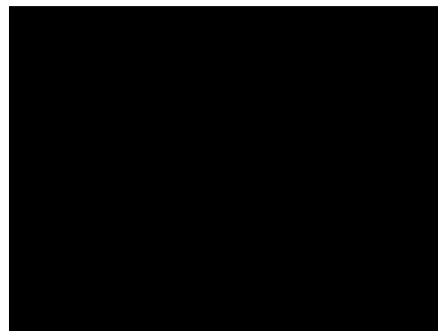
Note (3) The specified power supply current is under the conditions at $V_{CC} = 3.3\text{ V}$, $T_a = 25 \pm 2\text{ }^{\circ}\text{C}$, $f_v = 60\text{ Hz}$, whereas a power dissipation check pattern below is displayed.

a. White Pattern



Active Area

b. Black Pattern

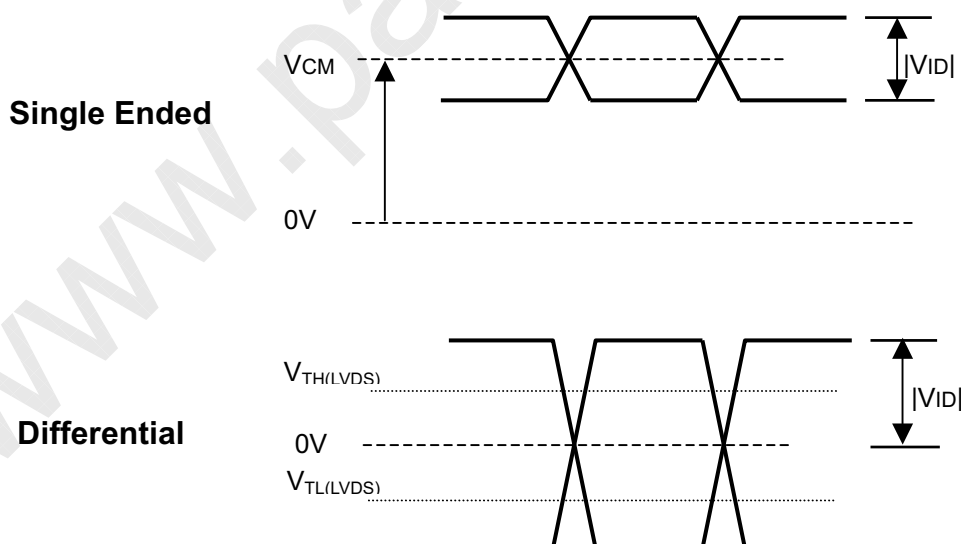


Active Area

Note (4) The specified power are the sum of LCD panel electronics input power and the converter input power. Test conditions are as follows.

- (a) $V_{CC} = 3.3\text{ V}$, $T_a = 25 \pm 2\text{ }^{\circ}\text{C}$, $f_v = 60\text{ Hz}$,
- (b) The pattern used is a black and white 32 x 36 checkerboard, slide #100 from the VESA file "Flat Panel Display Monitor Setup Patterns", FPDMSU.ppt.
- (c) Luminance: 60 nits.

Note (5) The parameters of LVDS signals are defined as the following figures.

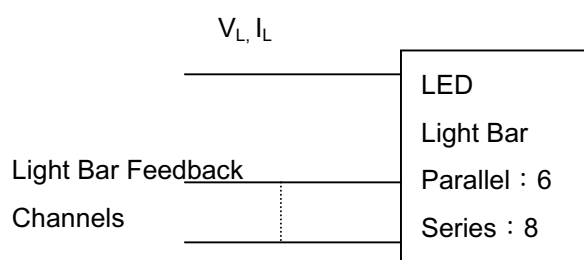


3.2 BACKLIGHT UNIT

Ta = 25 ± 2 °C

Parameter	Symbol	Value			Unit	Note
		Min.	Typ.	Max.		
LED Quantity		48			Pcs	(1),
LED light bar Power Supply Voltage	V _L	-	25.6	27.2	V _{dc}	(1), (2)
LED light bar Power Supply Current	I _L	-	120	TBD	mA	
LED Life Time	L _{BL}	10,000	-	-	Hrs	(4)
Power Consumption	P _L	-	3.072		W	(3), I _L = 120mA

Note (1) LED light bar configuration is shown as below:



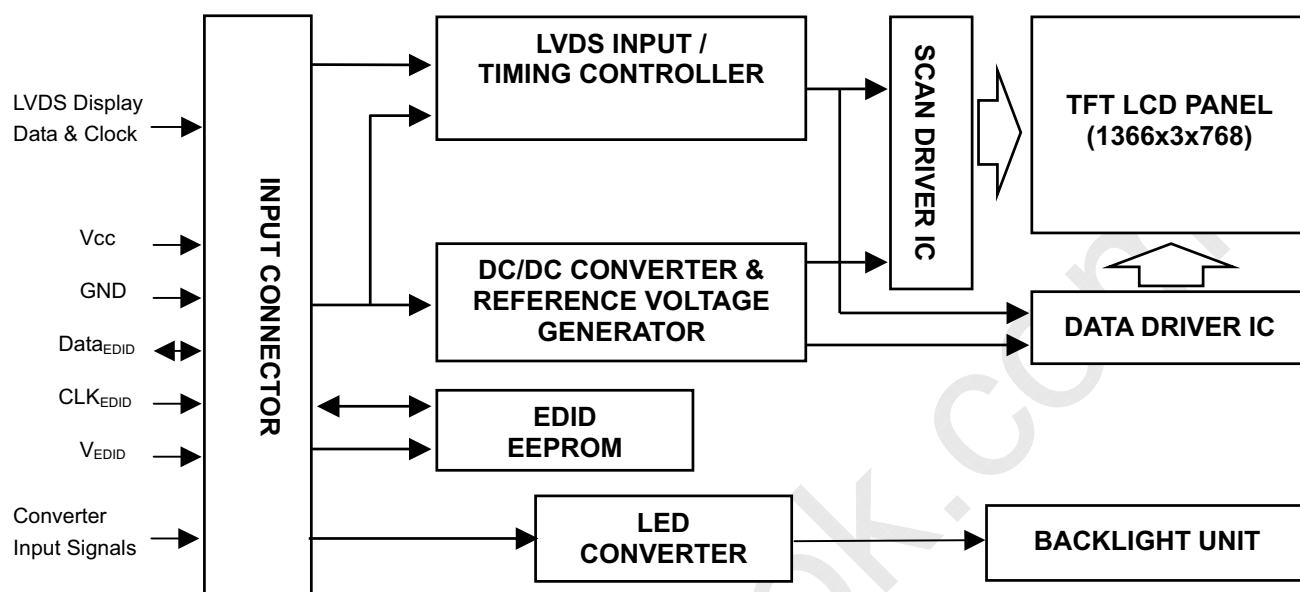
Note (2) For better LED light bar driving quality, it is recommended to utilize the adaptive boost converter with current balancing function to drive LED light-bar.

Note (3) $P_L = I_L \times V_L$

Note (4) The lifetime of LED is defined as the time when it continues to operate under the conditions at Ta = 25 ± 2 °C and I_L = 20 mA(Per EA) until the brightness becomes ≤ 50% of its original value.

4 BLOCK DIAGRAM

4.1 TFT LCD MODULE





Doc No.:
Issued Date: Jul, 22, 2008
Model No.: N134B6 -L04

Tentative

5 INPUT TERMINAL PIN ASSIGNMENT

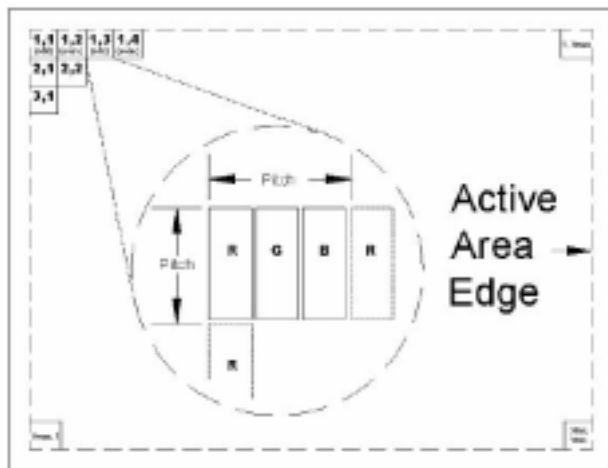
5.1 TFT LCD MODULE

Pin	Symbol	Description	Polarity	Remark
1	VSS	Ground		
2	VCCS	Power Supply +3.3 V		
3	VCCS	Power Supply +3.3 V		
4	EE_VDD	DDC +3.3 V		
5	NC	No Connection		
6	EE_SC	DDC Clock		
7	EE_SD	DDC Data		
8	Rx0-	LVDS Differential Data Input	Negative	R0~R5,G0-
9	Rx0+	LVDS Differential Data Input	Positive	
10	VSS	Ground		
11	Rx1-	LVDS Differential Data Input	Negative	G1~G5,B0,B1
12	Rx1+	LVDS Differential Data Input	Positive	
13	VSS	Ground		
14	Rx2-	LVDS Differential Data Input	Negative	- B2~B5,Hsync,Vsync,DE
15	Rx2+	LVDS Differential Data Input	Positive	
16	VSS	Ground		
17	RXC-	LVDS Clock Data Input	Negative	LVDS Level Clock
18	RXC+	LVDS Clock Data Input	Positive	
19	VSS	Ground	-	
20	NC	No Connection	-	
21	NC	No Connection		
22	VSS	Ground		
23	NC	No Connection		
24	NC	No Connection		
25	VSS	Ground		
26	NC	No Connection		
27	NC	No Connection		
28	VSS	Ground		
29	NC	No Connection		
30	NC	No Connection		
31	VSS	Ground		
32	VSS	Ground		
33	VSS	Ground		
34	NC	No Connection		
35	LED_PWM	PWM brightness control		
36	LED_EN	LED Enable		
37	NC	No Connection		
38	LED_VCCS	7V-20V LED Power		LED Power Input
39	LED_VCCS	7V-20V LED Power		
40	LED_VCCS	7V-20V LED Power		

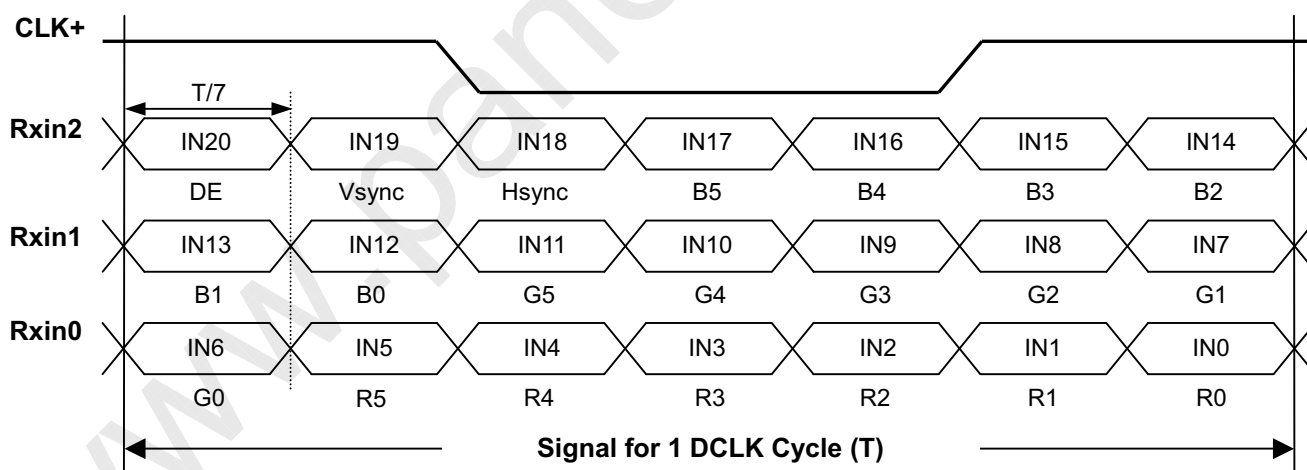
Note (1) Connector Part No.: I-PEX 20455-040E-12 or equivalent

Note (2) User's connector Part No.: I-PEX 20453-040T-01 or equivalent

Note (3) The first pixel is odd as shown in the following figure.



5.2 TIMING DIAGRAM OF LVDS INPUT SIGNAL



5.3 COLOR DATA INPUT ASSIGNMENT

The brightness of each primary color (red, green and blue) is based on the 6-bit gray scale data input for the color. The higher the binary input the brighter the color. The table below provides the assignment of color versus data input.

Color		Data Signal																	
		Red						Green						Blue					
		R5	R4	R3	R2	R1	R0	G5	G4	G3	G2	G1	G0	B5	B4	B3	B2	B1	B0
Basic Colors	Black	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Red	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
	Green	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
	Cyan	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1
	Magenta	1	1	1	1	1	1	0	0	0	0	0	0	1	1	1	1	1	1
	Yellow	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
	White	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Gray Scale Of Red	Red(0)/Dark	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Red(1)	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
	Red(2)	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	Red(61)	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
	Red(62)	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Red(63)	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	
Gray Scale Of Green	Green(0)/Dark	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Green(1)	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	Green(2)	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	Green(61)	0	0	0	0	0	0	1	1	1	1	0	1	0	0	0	0	0	0
	Green(62)	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0
Green(63)	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	
Gray Scale Of Blue	Blue(0)/Dark	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Blue(1)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	Blue(2)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	Blue(61)	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	1
	Blue(62)	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0
Blue(63)	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	

Note (1) 0: Low Level Voltage, 1: High Level Voltage



Doc No.:
Issued Date: Jul, 22, 2008
Model No.: N134B6 -L04

Tentative

5.4 EDID DATA STRUCTURE

The EDID (Extended Display Identification Data) data formats are to support displays as defined in the VESA Plug & Display and FPD1 standards.

TBD

6 CONVERTER SPECIFICATION

6.1 ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings
V _{in}	29.0V
Gnd	+/-0.3V
PWM, EN	-0.3V~70V

6.2 RECOMMENDED OPERATING RATINGS

Parameter		Symbol	Value			Unit	Note
			Min.	Typ.	Max.		
Converter Input power supply voltage		V _{in}	7	12.0	21.0	V	
EN Control Level	Backlight on		2.0	---	5.5	V	
	Backlight off		0	---	0.8	V	
PWM Control Level	PWM High Level		2.0	---	5.5	V	
	PWM Low Level		0	---	0.8	V	
PWM Control Duty Ratio			(20)		100	%	
PWM Control Frequency		f _{PWM}	(190)	(210)	(230)	Hz	
LED Power Current	V _i =7V	I _{BL}		TBD	TBD	mA	(1)
	V _i =21V			TBD	TBD	mA	(2)

Note (1) The specified LED power supply current is under the conditions at V_{cc} = 7V, T_a = 25 ± 2 °C, f_v = 200 Hz, Duty=100%.

Note (2) The specified LED power supply current is under the conditions at V_{cc} = 21V, T_a = 25 ± 2 °C, f_v = 200 Hz, Duty=100%.

7 INTERFACE TIMING

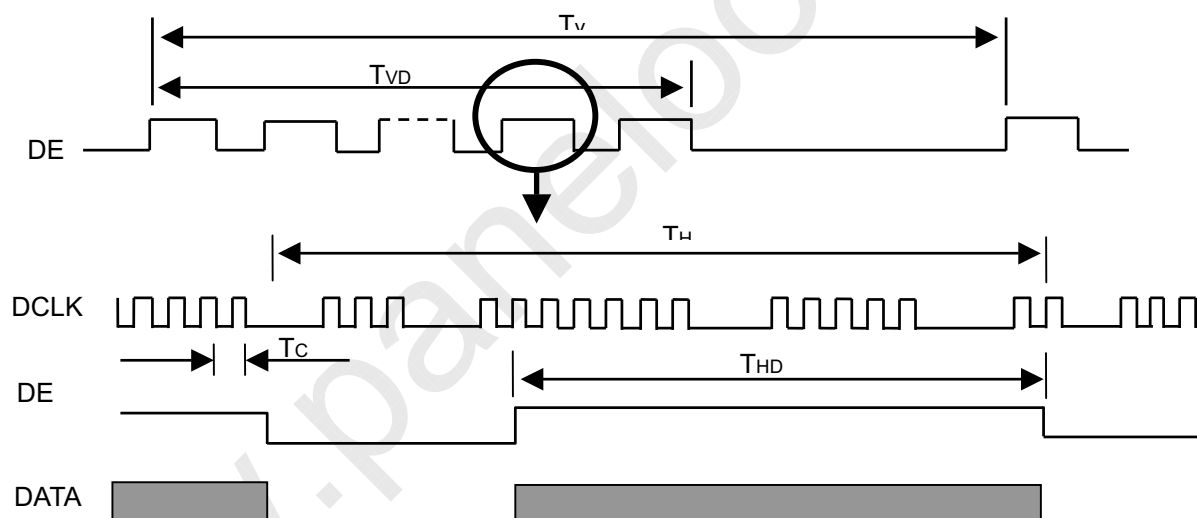
7.1 INPUT SIGNAL TIMING SPECIFICATIONS

The input signal timing specifications are shown as the following table and timing diagram.

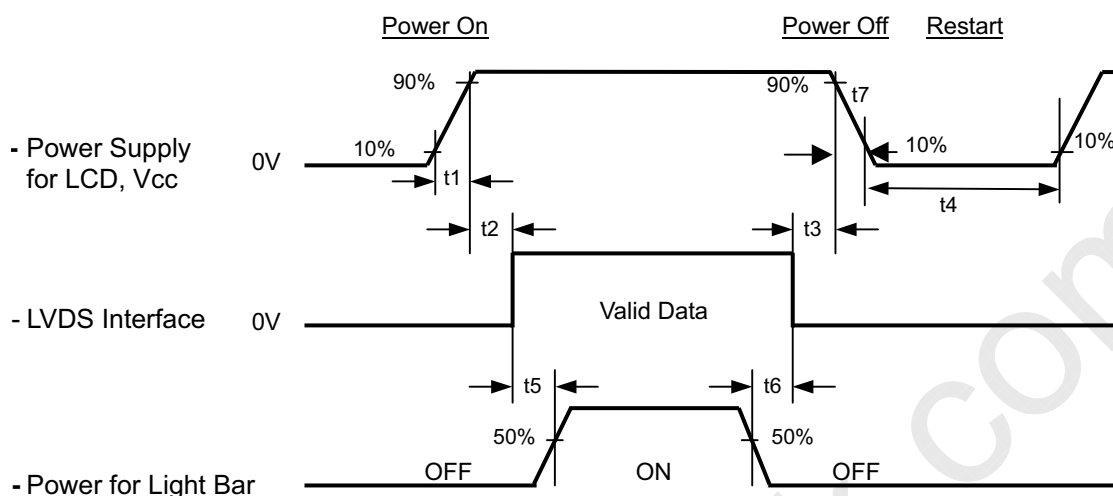
Signal	Item	Symbol	Min.	Typ.	Max.	Unit	Note
DCLK	Frequency	1/Tc	TBD	75.44	TBD	MHz	
DE	Vertical Total Time	TV	TBD	806	TBD	TH	
	Vertical Active Display Period	TVD	TBD	768	TBD	TH	
	Vertical Active Blanking Period	TVB	TV-TVD	38	TV-TVD	TH	
	Horizontal Total Time	TH	TBD	1560	TBD	Tc	
	Horizontal Active Display Period	THD	TBD	1366	TBD	Tc	
	Horizontal Active Blanking Period	THB	TH-THD	194	TH-THD	Tc	

Note (1) Because this module is operated by DE only mode, Hsync and Vsync are ignored

INPUT SIGNAL TIMING DIAGRAM



7.2 POWER ON/OFF SEQUENCE



Timing Specifications:

$$0.5 \leq t1 \leq 10 \text{ ms}$$

$$0 \leq t2 \leq 50 \text{ ms}$$

$$0 \leq t3 \leq 50 \text{ ms}$$

$$t4 \geq 500 \text{ ms}$$

$$t5 \geq 200 \text{ ms}$$

$$t6 \geq 200 \text{ ms}$$

Note (1) Please follow the power on/off sequence described above. Otherwise, the LCD module might be damaged.

Note (2) Please avoid floating state of interface signal at invalid period. When the interface signal is invalid, be sure to pull down the power supply of LCD Vcc to 0 V.

Note (3) The Backlight converter power must be turned on after the power supply for the logic and the interface signal is valid. The Backlight converter power must be turned off before the power supply for the logic and the interface signal is invalid.

Note (4) Sometimes some slight noise shows when LCD is turned off (even backlight is already off). To avoid this phenomenon, we suggest that the Vcc falling time is better to follow $(50\mu\text{s}) \leq t7 \leq (10 \text{ ms})$

8 OPTICAL CHARACTERISTICS

8.1 TEST CONDITIONS

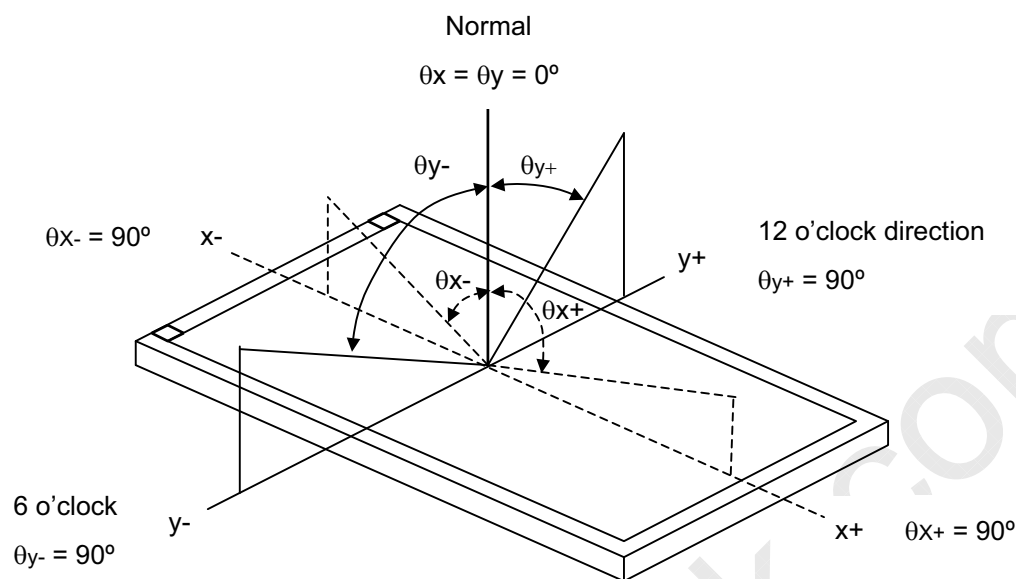
Item	Symbol	Value	Unit
Ambient Temperature	Ta	25±2	°C
Ambient Humidity	Ha	50±10	%RH
Supply Voltage	V _{CC}	3.3	V
Input Signal	According to typical value in "3. ELECTRICAL CHARACTERISTICS"		
LED Light Bar Input Current	I _L	120	mA

The measurement methods of optical characteristics are shown in Section 7.2. The following items should be measured under the test conditions described in Section 7.1 and stable environment shown in Note (6).

8.2 OPTICAL SPECIFICATIONS

Item		Symbol	Condition	Min.	Typ.	Max.	Unit	Note
Contrast Ratio		CR	$\theta_x=0^\circ, \theta_Y=0^\circ$ Viewing Normal Angle	300	500	-	-	(2), (5)
Response Time		T _R		-	2	7	ms	(3)
		T _F		-	6	11	ms	
Luminance of White (5P)		L _{AVE}		190	220	-	cd/m ²	(4), (5)
White Variation		δW		-	-	1.25	-	(5), (6)
Color Chromaticity	Red	R _x		Typ.- 0.05	(0.586) (0.340) (0.329) (0.578) (0.157) (0.135) (0.313) (0.329)	Typ.+ 0.05	-	(1), (5)
		R _y					-	
	Green	G _x					-	
		G _y					-	
	Blue	B _x					-	
		B _y	-					
	White	W _x	-					
		W _y	-					
Viewing Angle	Horizontal	θ _x +	CR≥10	40	45	-	Deg.	(1), (5)
		θ _x -		40	45	-		
	Vertical	θ _y +		15	20	-		
		θ _y -		40	45	-		

Note (1) Definition of Viewing Angle (θ_x , θ_y):



Note (2) Definition of Contrast Ratio (CR):

The contrast ratio can be calculated by the following expression.

$$\text{Contrast Ratio (CR)} = L_{63} / L_0$$

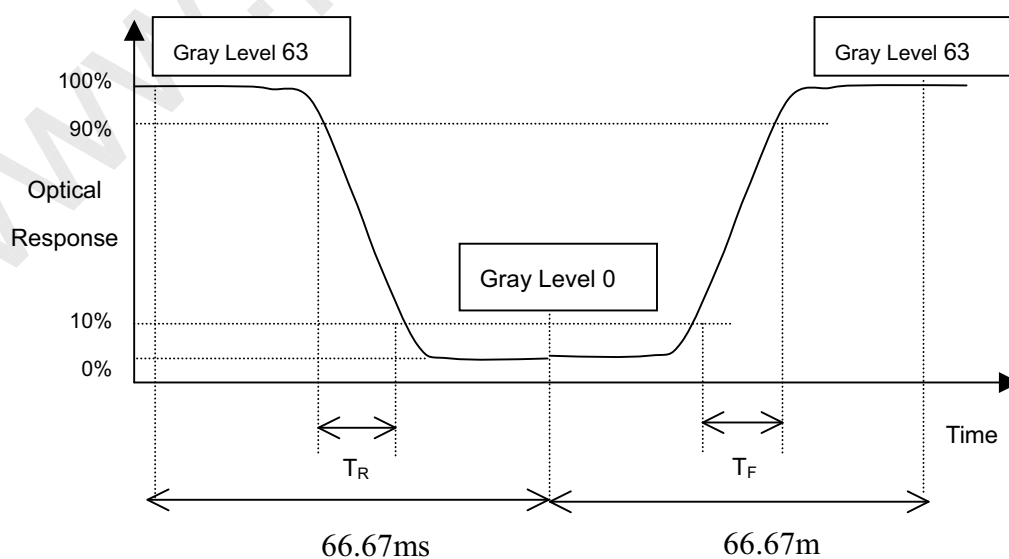
L63: Luminance of gray level 63

L 0: Luminance of gray level 0

$$\text{CR} = \text{CR} (5)$$

CR (X) is corresponding to the Contrast Ratio of the point X at Figure in Note (6).

Note (3) Definition of Response Time (T_R , T_F):



Note (4) Definition of Average Luminance of White (L_{AVE}):

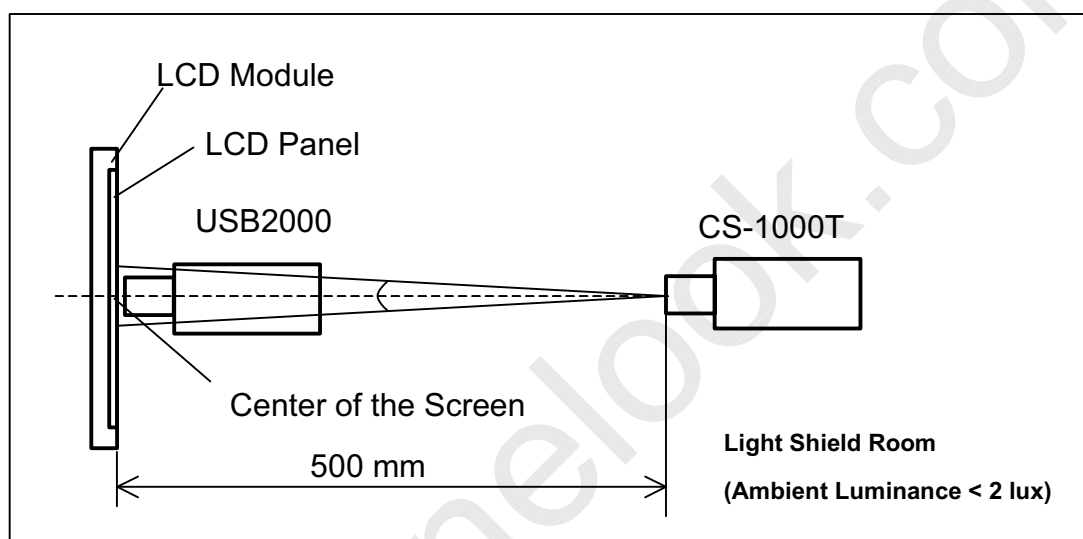
Measure the luminance of gray level 63 at 5 points

$$L_{AVE} = [L(1) + L(2) + L(3) + L(4) + L(5)] / 5$$

$L(x)$ is corresponding to the luminance of the point X at Figure in Note (6).

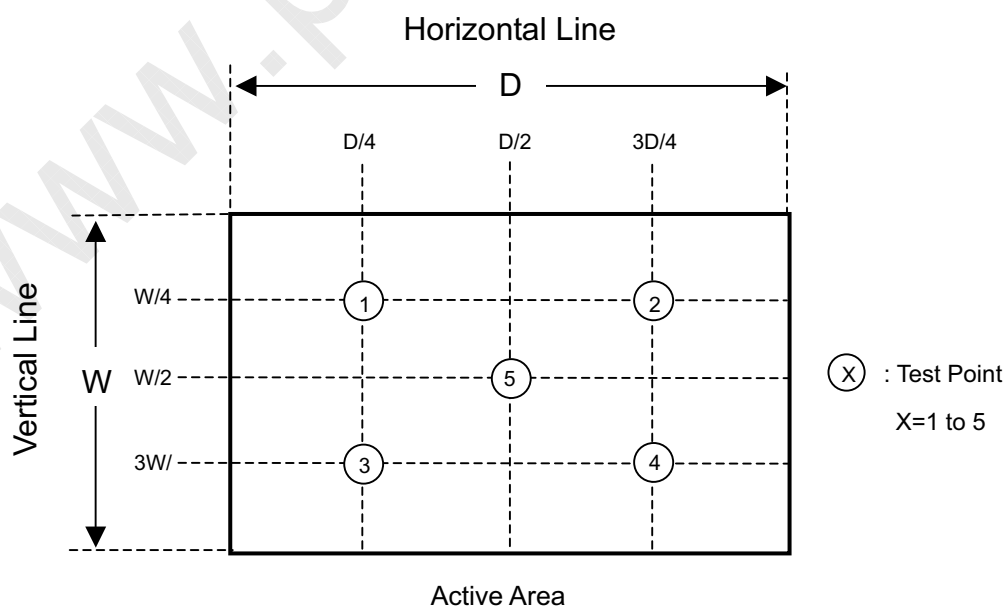
Note (5) Measurement Setup:

The LCD module should be stabilized at given temperature for 15 minutes to avoid abrupt temperature change during measuring. In order to stabilize the luminance, the measurement should be executed after lighting Backlight for 15 minutes in a windless room.


Note (6) Definition of White Variation (δW):

Measure the luminance of gray level 63 at 5 points

$$\delta W = \text{Maximum} [L(1), L(2), L(3), L(4), L(5)] / \text{Minimum} [L(1), L(2), L(3), L(4), L(5)]$$



9 PRECAUTIONS

9.1 HANDLING PRECAUTIONS

- (1) The module should be assembled into the system firmly by using every mounting hole. Be careful not to twist or bend the module.
- (2) While assembling or installing modules, it can only be in the clean area. The dust and oil may cause electrical short or damage the polarizer.
- (3) Use fingerstalls or soft gloves in order to keep display clean during the incoming inspection and assembly process.
- (4) Do not press or scratch the surface harder than a HB pencil lead on the panel because the polarizer is very soft and easily scratched.
- (5) If the surface of the polarizer is dirty, please clean it by some absorbent cotton or soft cloth. Do not use Ketone type materials (ex. Acetone), Ethyl alcohol, Toluene, Ethyl acid or Methyl chloride. It might permanently damage the polarizer due to chemical reaction.
- (6) Wipe off water droplets or oil immediately. Staining and discoloration may occur if they left on panel for a long time.
- (7) If the liquid crystal material leaks from the panel, it should be kept away from the eyes or mouth. In case of contacting with hands, legs or clothes, it must be washed away thoroughly with soap.
- (8) Protect the module from static electricity, it may cause damage to the C-MOS Gate Array IC.
- (9) Do not disassemble the module.
- (10) Do not pull or fold the lamp wire.
- (11) Pins of I/F connector should not be touched directly with bare hands.

9.2 STORAGE PRECAUTIONS

- (1) High temperature or humidity may reduce the performance of module. Please store LCD module within the specified storage conditions.
- (2) It is dangerous that moisture come into or contacted the LCD module, because the moisture may damage LCD module when it is operating.
- (3) It may reduce the display quality if the ambient temperature is lower than 10 °C. For example, the response time will become slowly, and the starting voltage of lamp will be higher than the room temperature.

9.3 OPERATION PRECAUTIONS

- (1) Do not pull the I/F connector in or out while the module is operating.
- (2) Always follow the correct power on/off sequence when LCD module is connecting and operating. This can prevent the CMOS LSI chips from damage during latch-up.
- (3) The startup voltage of Backlight is approximately 1000 Volts. It may cause electrical shock while assembling with converter. Do not disassemble the module or insert anything into the Backlight unit.

10 PACKING

10.1 CARTON

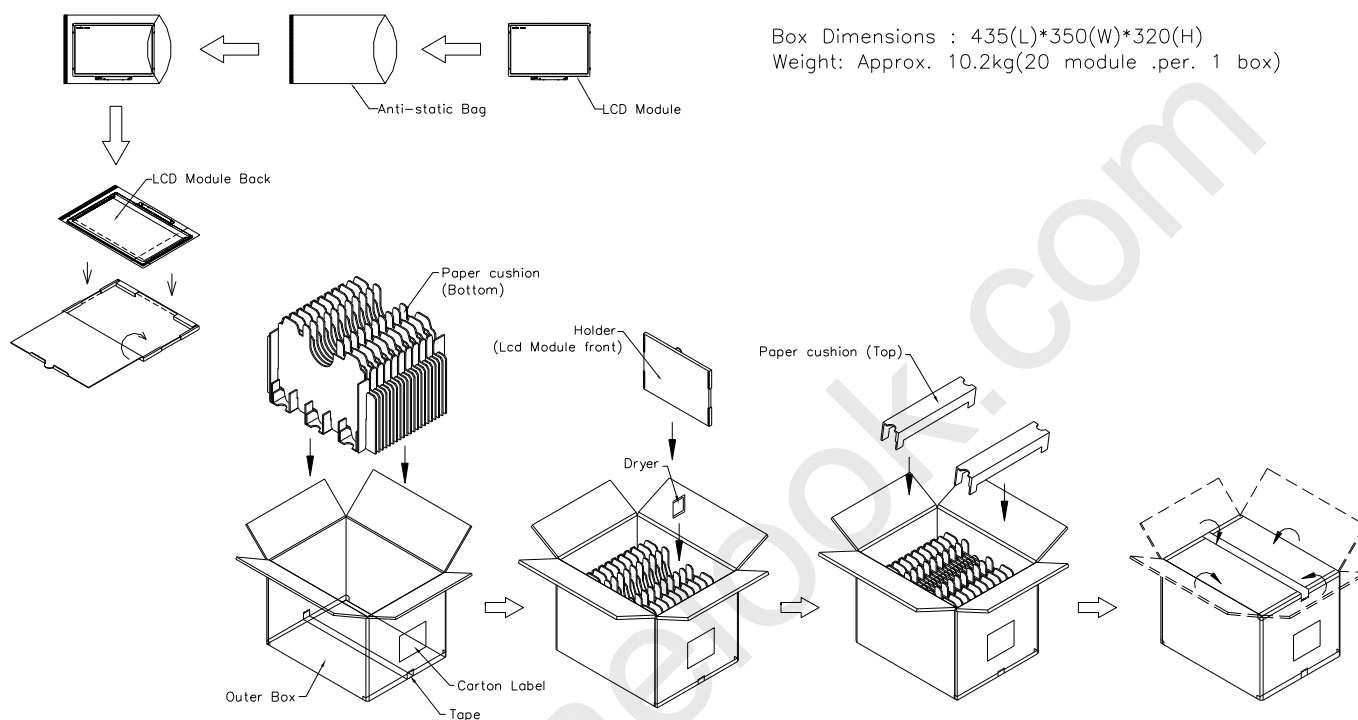
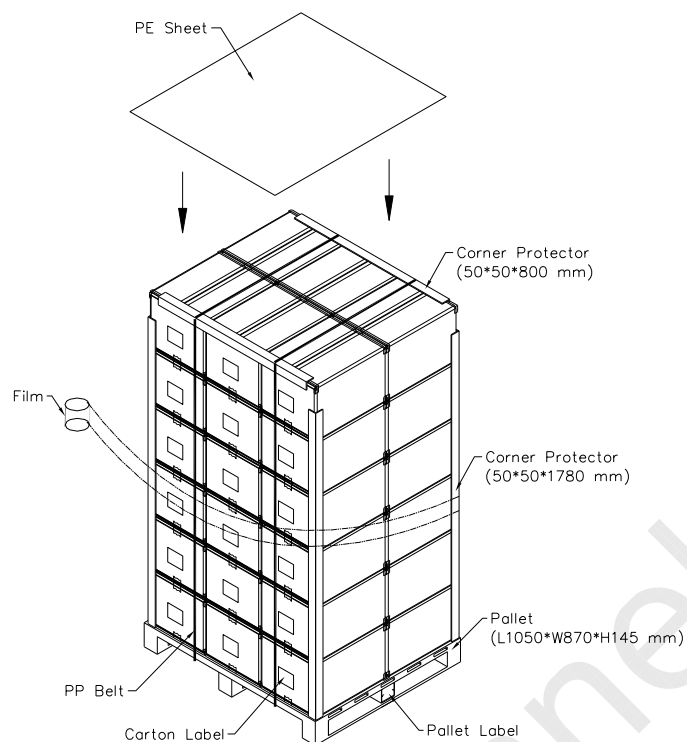


Figure. 10-1 Packing method

10.2 PALLET

Sea & Land Transportation



Air Transportation

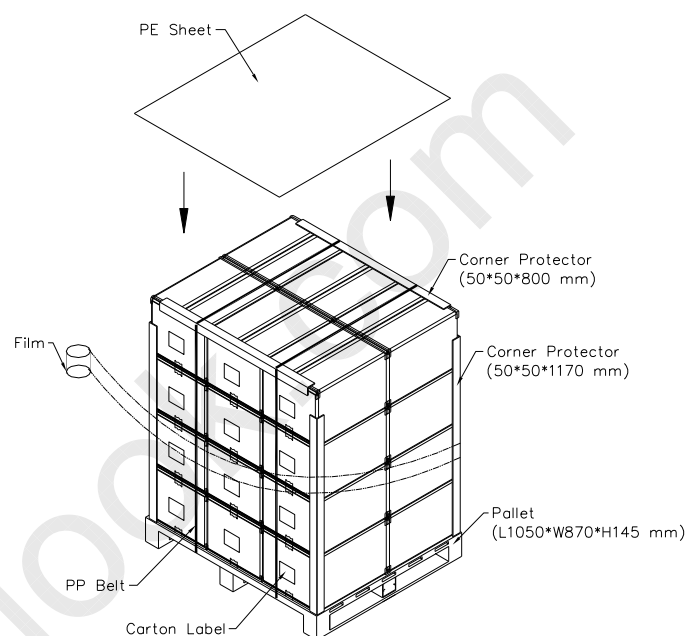
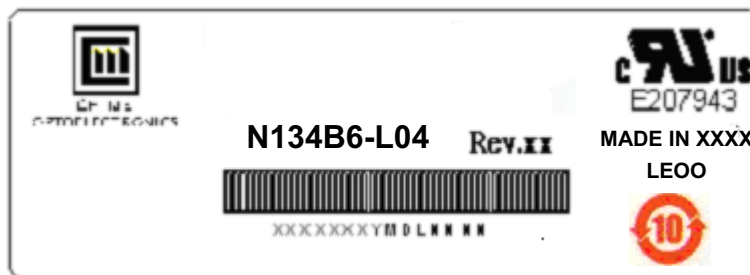


Figure. 10-2 Packing method

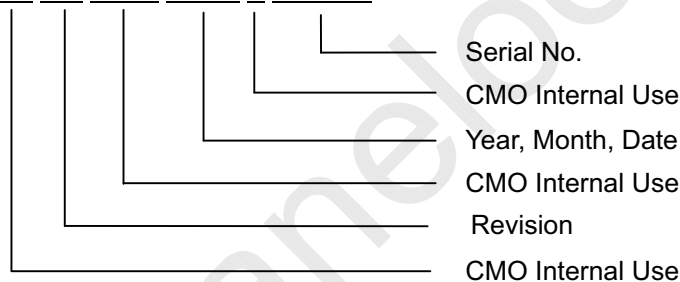
11 DEFINITION OF LABELS

11.1 CMO MODULE LABEL

The barcode nameplate is pasted on each module as illustration, and its definitions are as following explanation.



- (a) Model Name: N134B6 - L04
- (b) Revision: Rev. XX, for example: C1, C2 ...etc.
- (c) Serial ID: X X X X X X X Y M D X N N N N



- (d) Production Location: MADE IN XXXX. XXXX stands for production location.
- (e) UL/CB logo: "LEOO" especially stands for panel manufactured by CMO Ningbo satisfying UL/CB requirement. "LEOO" is the CMO's UL factory code for Ningbo factory.

Serial ID includes the information as below:

- (a) Manufactured Date: Year: 1~9, for 2001~2009
 Month: 1~9, A~C, for Jan. ~ Dec.
 Day: 1~9, A~Y, for 1st to 31st, exclude I, O and U
- (b) Revision Code: cover all the change
- (c) Serial No.: Manufacturing sequence of production

11.2 CARTON LABEL



The image shows a template for a carton label. It features a blue header with the CHI MEI logo and company name. Below this, there are four lines for text entry: PO.NO., Part ID., Model Name, and Carton ID. To the right of the last two lines is a field for Quantities. A large, light blue 'CMO' watermark is visible in the background. At the bottom, there is a 'Made in XXXX' label and a RoHS compliance logo (a green circle with 'GP' and 'RoHS' text).

(a) Production location: Made in XXXX. XXXX stands for production location.

